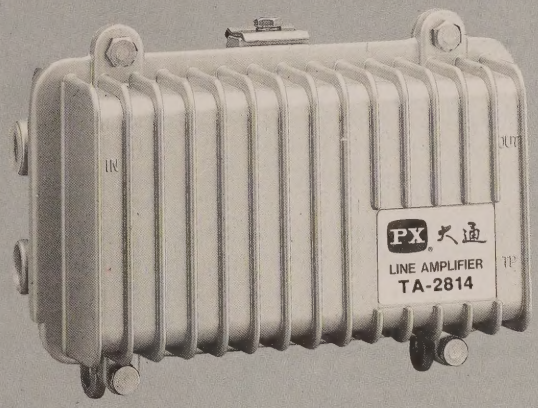
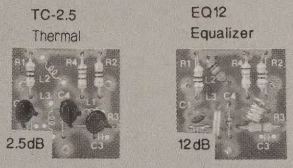
Priority in Service Quality

CABLE TV SYSTEMS

Model : TA-2814
CATV 2 WAY LINE AMPLIFIER



Module Ic Design
High Power
Max. RFI Integrity



TA-2814

FEATURES :

1. THe special design for CATV 2 Way Transmission.
2. CATV Hybrid Integrated Circuit design for high quality amplification and high power output.
3. 5-30 MHz Return Path design equipped Plug-in Return Amplifier.(Reverse module RA5/30 already equipped in).
4. Tuning type Gain Control (0 - 20dB adjustable) to meet the required output level.
5. Various slope adjustments to meet the feature of cable attenuation:
   a.Plug-in type equalizer(8, 11, 12, 14, 17dB option; 12dB equalizer will be equipped, if not specified).
   b.Tuning type slope control (0 - 8dB adjustable).
6. Plug-in Thermal compensation circuit available for ± 0.75dB in temperature range from -40C to +60C.(Thermal compensator TC-2.5T already equippeed in).
7. Built-in input/output arresters for double safety.
8. Wire mesh gasket to achive Max. RFI integrity.
9. 360 aluminum alloy diecast housing.

INSTALLATION

TA-2814 Functional Diagram

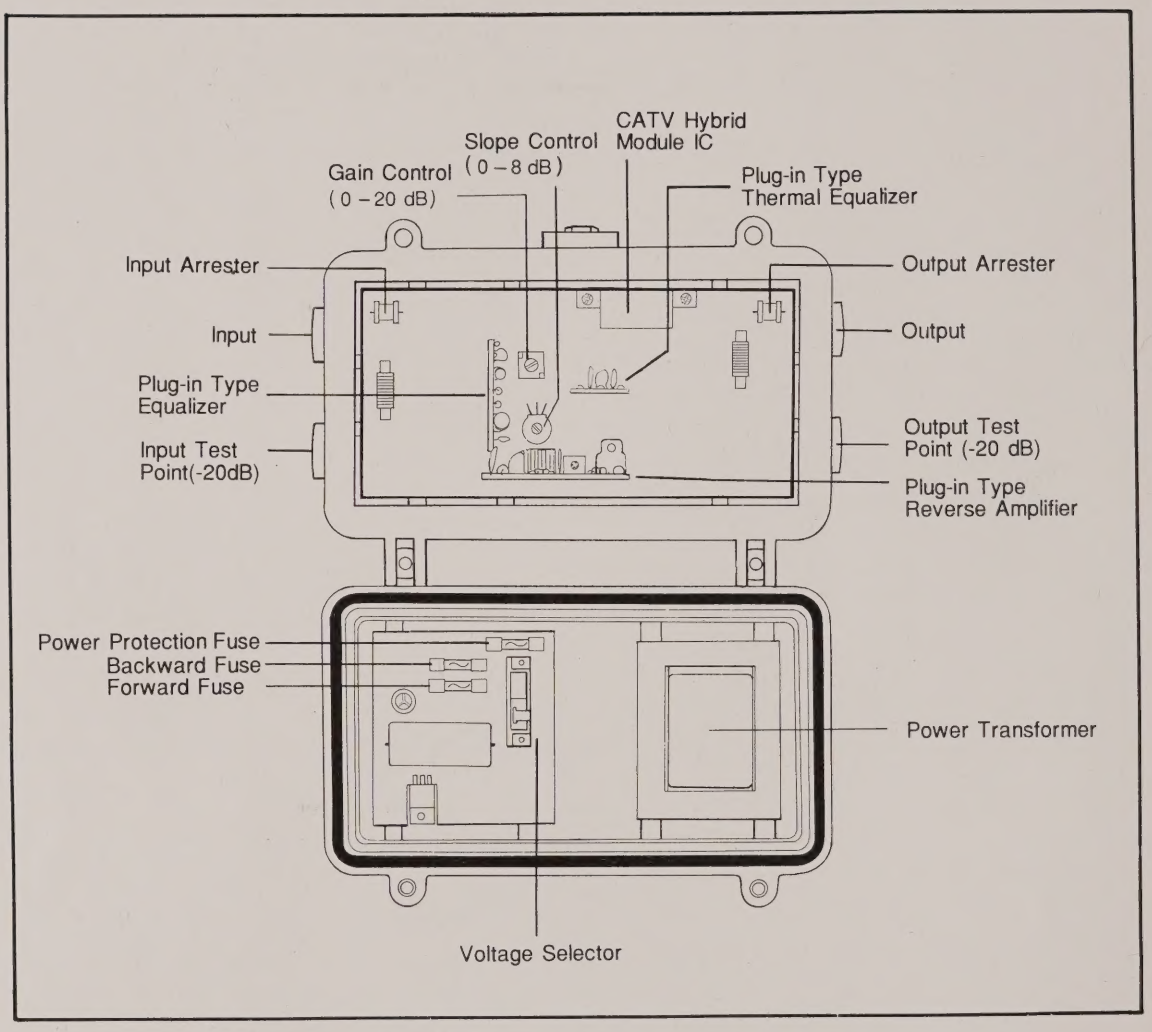


Figure 1 (Power Feeding Select)

a.Power Feeding Backward	b.Power Feeding Forward	c.Power Feeding Both-Pass
F IN / F OUT	F IN / F OUT	F IN / F OUT
AC POWER	AC POWER	AC POWER
Remove F-in Fuse And Power Feeded Through F-out Fuse	Remove F-out Fuse And Power Feeded Through F-in Fuse.	Power Feeded Through Both F-in & F-out Fuses.

Figure 2(Voltage Select)

Power Selector

	Voltage Selector
25V	25~30V
35V	31~40V
45V	41~50V
55V	51~60V

1.Use steel wire to hang TA-2814 Amplifier and have it fixed on mast.
2.Open the cover to fix the Input and Output connectors for signals connecting.
- ●Use J-283 F to 5/8 connector when F11/7C-2V cable is being used.
- ●Use exclusively Feed Through Connector when 0.500" cable is being used.
- ●Adjust the amplifier refering to the instruction.

3.Power Source Selections :
- ●Select power feeding to Forward, Backward or Both Forward and Backward by removing power fuse. Refer the Figure 1 for power feeding select.
- ●Use the electrometer to measure the Voltage value of Input & Output terminals of amplifier. According to measured Voltage value, adjust Voltage selector to the closer level of the Voltage value. Refer to Figure 2 for proper Voltage select.

4.Signal Level Adjustment :
- ●Adjust output signal level of first TA-2814 amplifier, and make the output signal level of each channel to be 95 dBuV(+35dBmV).
- ●Maintain the input signal level of each TA-2814 amplifier to be over 70 dBuV(+10dBmV). (Note : For 300MHZ System, install one TA-2814 amplifier every 300M when F11/7C-2V cable is being used. This will maintain its proper signal level).
- ●The procedure of Signal Level Adjustment.
  - a.Plug the equalizer and thermal into amplifier(EQ-12dB Equalizer and TC-2.5 Thermal Equalizer are plugged in already).
  - b.Adjust the gain control (0-20 dB) for making all the channels output signal level to be 95 dBuV(+ 35dBmV).
  - c.Adjust the slope control for making all the channels output signal reach to a certain level.
  - d.RA5/30 (5-30MHZ 14 dB Gain)Revised Module is plugged in already.
- ●The methods of Equalizer Selecting :
  - a.Calculate the cable loss for 300 MHZ (For 300 MHZ System, only calculate the signal loss of coaxial cable, but not the other distributions).
  - b.Select the identical value equzlizer based on the (A)'s calculated value. If you have no identical ones. Select the lower value equalizer and do slope control adjustment.
  - c.Equalizers include 8, 11, 14, 17 dB to be selected. (TA-2814 amplifier already equipped with 12 dB equalizer, specify other values when ordering).

5.Using the Thermal Equalizer.
- ●According to the thermal changes of coaxial cable features,thermal equalizer should be used properly.
- ●TC-2.5(2.5dB Thermal Equalizer) is plugged. Jumper is attached for optional when TC-2.5 is not used.

6.The output of TA-2814 amplifier is equipped with test point (-20 dB) for measuring the signal level. (Use attached J-283 F to 5/8" connector for testing cable connection).

7.Installation Notice:
- ●When F11/7C-2V cable is being used for 300 MHZ System transmission, approximately install one TA-2814 amplifier of every 300M. Cable connector J-283 needs to be matched when installing.
- ●When 0.500" cable is being used for 300 MHZ System transmission, approximately install one TA-2814 amplifier of every 600M. 0.500" cable exclusively used cable connector needs to be matched when installing.
- ●When both the Input & Output terminal of TA-2814 amplifier connects with the cable connectors, the use of water-proof caps are needed.
- ●For Input & Output connector fitting :

a.Do not use too long pin (approx. 25 MM) to prevent short-circuit.
b.When replace the connectors, firstly open the cover and loosen the fixed screws, then take apart the original connectors to avoid damaging its structure.

8.Accessories :
- ●Equalizer Jumper - 1 Pcs.
- ●Thermal Jumper - 1 Pcs.
- ●Reverse Jumper - 1 Pcs.
- ●J-283 (F TO 5/8 connector) - 2 Pcs.
- ●10A Fuse (Forward & Backward) - 2 Pcs.

TA-2814 2 WAY CATV LINE AMPLIFIER

SPECIFICATIONS :

Items	Specifications
Frequency Range (Forward)	TA-2814A 45-300 MHZ TA-2814B 45-450 MHZ TA-2814C 45-550 MHZ
Frequency(Reverse)	5 – 30 MHZ
Frequency Response	± 0.5 dB
Maxmium Gain(Forward)	28 dB
Reverse Gain	14 dB
Gain Control	0 – 20 dB
Slope Control	0 – 8 dB
Equalizer	12 dB (8, 11, 14, 17 dB Option)
Max. Output Level	110 dB (For NTSC 36 Channels Input) (For PAL B 28 Channels Input)
Noise Figure	7 – 9 dB
Input/Output Return Loss	16 dB Nom.
Cross Modulation	-57 dB : 50 dBmV
Second Order	-70 dB : 49 dBmV
Composite Triple Beat	-57 dB : 49 dBmV
Hum Modulation	-70 dB
Lightning Conductor	500A (10/100㎲S Pulse, 1.5 X 40㎲S)
Output Test Point	-20 dB
Input/Output Impedance	75 Ohm
Voltage Range	25 – 55 V/AC
Temperature Range	(-40°C) – (+60°C)
Diamension	200(W) X 136(L) X 110(H) mm
Weight	2.0 KGS